

App. Serial No. 10/502,282
Docket No.: NL020053US

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In the Drawings:

Please find attached one Replacement Drawing Sheet for entry, Figure 5. The only change from its immediate version is an identifier label "Prior Art". No other changes to the figure are requested.

Attached: FIG. 5 - Replacement Sheet

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Remarks

Claims 1-10 are pending in this application. Reconsideration and allowance of the application are respectfully requested for at least the following reasons: (1) the Examiner has not presented correspondence for the limitations directed toward a summation; (2) the Examiner's use of official notice is plainly erroneous; (3) there is no motivation to combine the cited equation ($e = (S^2/12)^{1/2}$) with the Nishio reference in that the combination would render Nishio unfit for its intended operation; and (4) the asserted combination of the Kim reference's windowing of video signals (e.g., into $M \times N$ sized images) with Nishio's audio signals would also result in an indiscernible/inoperable embodiment.

The Final Office Action dated April 30, 2007 indicated an objection to Figure 5, objections to the specification, an objection to the abstract and listed one rejection, specifically that claims 1 and 9 stand rejected under 35 U.S.C. § 103(a) over Nishio (U.S. 5,774,842) in view of Kim (U.S. 5,636,295).

Applicant notes that the Examiner has not presented a rejection for claims 2-7 and 9-10. As such, Applicant respectfully submits that these claims should be identified as allowable.

Applicant respectfully traverses the Section 103(a) rejection of claims 1 and 9 because the Examiner has not shown correspondence for each of the claim limitations. For instance, the equation of claims 1 and 9 requires a summation of the formula over the set $n=0$ to $n=W-1$, wherein W represents the number of samples per window. As the references do not teach or suggest such a summation, the Examiner has failed to show any correspondence to such a summation. Accordingly, the rejections are improper and Applicant respectfully requests that the rejections be withdrawn.

Applicant respectfully traverses the Examiner's statement taking Official Notice that the equation $e = (S^2/12)^{1/2}$ performs the same functionality as the equation in claims 1 and 9. "Official notice without documentary evidence to support an examiner's conclusion is permissible only in certain, limited circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection." See M.P.E.P. § 2144.03. The Examiner appears to be relying upon a reference (i.e., "Principals of communication systems" by Herbert Taub & Donald L. Schilling) to support the assertion that the equation $e = (S^2/12)^{1/2}$ is well known. However, Applicant has not been

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provided with a copy of the relevant portions of this reference, and it appears that the Examiner is relying upon this reference to support the assertion that the two equations perform the same functionality. "It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known." Applicant submits that it is not instantly and unquestionable demonstrable that the equation $c = (S^2/12)^{1/2}$ performs the same functionality as Applicant's equation. For example, the cited equation does not have a window-function $w[n]$ or a summation as does the equation of the claimed invention. As such, the cited equation does not appear to perform the same functionality as Applicant's equation. Thus, the Examiner's taking of Official Notice is improper. Therefore, the Section 103(a) rejection of claims 1 and 9 is improper and Applicant requests that it be withdrawn. Pursuant to M.P.E.P. § 2144.03, should this rejection (or a similar one) be maintained, Applicant respectfully requests support for both the Examiner's assertion that the asserted equation is well known, that this equation performs the same functionality as Applicant's equation, and evidence/rationale of the combinability of this equation with the references.

Applicant respectfully further traverses the Section 103(a) rejection of claims 1 and 9 because there is no motivation for a skilled artisan to combine the references, especially since the combination would not result in an operable embodiment. Pursuant to M.P.E.P. § 2143.01, a Section 103(a) rejection cannot stand where the asserted combination would render the reference unfit for its intended operation. *See also In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

With regard to the Examiner's asserted combination of the equation $e = (S^2/12)^{1/2}$ and the Nishio reference, the incorporation of this equation into the cited portions of the Nishio reference is illogical. More specifically, the Nishio reference teaches determining the quantization error that is generated at the time of quantization by using subtractor 12 to subtract the input to the quantizer 11 from the output of the quantizer 12. *See, e.g.*, Figure 8 and Col. 5:16-20. The Examiner appears to propose incorporating the equation $c = (S^2/12)^{1/2}$ into the subtractor 12 of Nishio. However, Applicant submits that it would be illogical and impractical to incorporate this equation into the subtractor 12. For example, subtractor 12 of the Nishio reference determines the quantization error by a simple comparison of two inputs, one without

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errors and one with errors, whereas the cited equation has no corresponding inputs (*i.e.*, its only input is a step variable *S*). Thus, inserting the cited equation into Nishio's application would be illogical and would render the Nishio reference unfit for its intended operation of removing the quantization error. *See, e.g.*, Nishio's Abstract. Accordingly, the rejection of claims 1 and 9 is improper and cannot stand.

Moreover, as discussed above, the Nishio reference determines the quantization error that is generated by the quantizer 12. *See, e.g.*, Figure 8 and Col. 5:16-20. Thus, there would be no reason to combine an equation for determining the quantization error with the Nishio reference as proposed by the Examiner, because Nishio already determines the quantization error. At best, such error calculation would be redundant. Therefore, the Section 103(a) rejection of claims 1 and 9 is improper for lack of motivation or suggestion to combine and Applicant requests that it be withdrawn.

With regard to the Examiner's asserted combination of the Nishio and Kim references, there is no motivation to combine the cited teachings of Kim with Nishio because it would be illogical to combine Kim's decoding of discrete cosine transform coded image signals with the analog-to-digital conversion of audio signals taught by Nishio.

One of skill in the art would recognize that the quantization discussed in the Kim reference is for the purposes of data compression. (*See, e.g.*, *The JPEG Still Picture Compression Standard*, Wallace, Gregory K., at Section 4.2 <<http://white.stanford.edu/~brian/psy221/rcadr/Wallace.JPEG.pdf>>). In contrast, the quantization error of Nishio reference is introduced during an analog-to-digital conversion. The Kim reference teaches correcting for errors introduced via a frequency-domain quantization through the use of a random noise generator 51. Accordingly, one of skill in the art would recognize that the asserted combination of the Nishio and Kim references would be illogical because the windowing aspect of the Kim reference does not correspond to quantization errors introduced during an analog-to-digital conversion of an audio signal.

For example, the cited portions of the Kim reference teach that the windowing block 10 divides the image signal into a number of sub-image signals by multiplying the image signal with a known window weight factor (*see, e.g.*, Figure 2 and Col. 3:9-14), and that the quantization noise signal is divided into sub-noise signals identical to the sub-image signals in terms of their dimension (*e.g.*, 8x8, *see* Col 3:54-62) at the windowing block 54 (*see, e.g.*,

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Figure 4 and Col. 4:50-53). The Examiner asserts that "it would have been obvious to one of ordinary skill in the art to incorporate the windowing function as taught in the Kim for the benefit of dividing the image signals into sub-images." However, the Nishio reference is directed towards the processing of audio signals, as such, Nishio has no corresponding image signals to divide into sub-images. Thus, there would be no motivation for one of skill in the art to combine Kim's windowing with the Nishio reference because the asserted combination would be indiscernible and/or inoperable. Accordingly, the Section 103(a) rejection of claims 1 and 9 is improper and Applicant requests that it be withdrawn.

Regarding the objection to the Abstract, Applicant has provided an amended Abstract on page 2 of this paper, in which the "legal phraseology" has been removed. Applicant submits that the objection to the Abstract has been appropriately addressed.

Regarding the objection to paragraph 0059 of the specification, Applicant has amended paragraph 0059 (*i.e.*, Table 1) as indicated on page 3 of this paper, in which the value in column 2 row 2 of Table 1 has been amended to be consistent with Figure 2 and the reset of the specification. Thus, Applicant submits that the objection to the specification has been appropriately addressed.

Regarding the Office Action's suggestion to add section headings, Applicant respectfully declines because the indicated suggestions in 37 C.F.R. § 1.77(b) are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 C.F.R. § 1.51(d) are only guidelines that are suggested for applicant's use. They are not mandatory, and in fact when Rule 77 was amended in 1996 (61 FR 42790, Aug. 19, 1996), Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, stated in the Official Gazette:

"Section 1.77 is permissive rather than mandatory. ... 1.77 merely expresses the Office's preference for the arrangement of the application elements. The Office may advise an applicant that the application does not comply with the format set forth in 1.77, and suggest this format for the applicant's consideration; however, the Office will not require any application to comply with the format set forth in 1.77."

In view of the above, Applicant prefers not to add section headings.

Regarding the objection to Figure 5, attached please find a Replacement Drawing sheet for entry. The only change is the addition of the label "Prior Art" to Figure 5. Applicant respectfully submits that the objection to Figure 5 is now overcome.

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Applicant submits that each of the objections has been overcome and respectfully requests that they be removed.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

Please direct all correspondence to:

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